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**Questions to think about****Week 1 (in past years this was an assignment)**

1. Identify instances of anthropomorphism in Darwin's writing.
2. Make a list of all of the possible website topics that are mentioned in this chapter. Which of these are new to you?
3. Make a short list of a few important facts that you know that Darwin did not know. Explain how he would have used these facts in support of his theory of evolution.
4. Why (do you suppose) Darwin stated, early in the chapter "*We are concerned only with the diversities of instinct and of the other mental faculties in animals of the same class.*"
5. Find three questions in this chapter that Darwin was unable to answer.
6. Explain why Darwin's use of the word habit is confusing.
7. Identify behaviors described by Darwin that appear to fit (at least loosely) within Tinbergen's definition of a fixed action pattern.
8. Identify a few examples of what we now call "the comparative method".
9. Identify at least one passage in which Darwin describes a concept that we now refer to as "a fitness landscape"
10. What would Darwin have to say about Stephen J. Gould's theory of "punctuated equilibrium" or Goldschmidt's idea of "hopeful monsters" as applied to instinct?
11. Describe the example of "mathematical modeling" from the chapter on instinct and explain the role of empirical research in that collaboration.
12. Identify one passage in which Darwin invokes what we now refer to as "group selection" and discuss the prevailing preferred explanation (kin selection).
13. Identify one passage in which Darwin describes a process that we now refer to as "exaptation".
14. Note instances of "Alternative Reproductive Tactics" that are briefly mentioned.
15. Find someone in the class who read a different version of the chapter than you did. Working together, can you find anything different between the two versions?
16. Do some outside reading to learn what Darwin refers to as "the well-known doctrine of inherited habit advanced by Lamarck"
17. Who is this Huber guy Darwin keeps referring to?
18. Describe a few instances where Darwin discusses experiments that he performed.
19. Write a careful modern definition for Altruism and Mutualism with regard to animal relationships using terms of natural selection. Then explain, based on information in lecture why the aphid/ant relationship described by Darwin is not a case of Altruism.